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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/881,697	06/18/2001	Hiroshi Ilzuka	P100158-00034	8595

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EXAMINER	
MAKI, STEVEN D	

ART UNIT	PAPER NUMBER
1733	

DATE MAILED: 04/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/881,697	IIZUKA ET AL.	
	Examiner	Art Unit	
	Steven D. Maki	1733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12-23-03*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 and 3-5* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 and 3-5* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1) The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2) Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 5 is indefinite because it can depend on itself. In claim 5 lines 1-2, it is suggested to change "any one of claims 1, 3, 4 and 5" to --any one of claims 1, 3 and 4--.

3) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4) Claims 1 and 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art (specification page 1 lines 9-25, page 2 lines 1-4, page 9 lines 2-6) in view Kukimoto et al (US 5445201) and Kabe et al (US 5345988) and optionally Montagne (US 3763911).

The admitted prior art discloses a pneumatic tire having a ribbed tire having grooves whose width is widened during inflation wherein both groove walls are inclined at 80 degrees with respect to the tread surface. The admitted prior art appears to teach that uneven wear occurs with this tire. A thin rib is not provided in the main groove. However, it would have been obvious to one of ordinary skill in the art to provide the grooves of the admitted prior art with a generally U-shaped main groove portion, a thin

rib and a narrow groove portion since Kukimoto et al suggests using such a main groove configuration (see figures 19a, 19b) so that the tire has excellent uneven wear resistance. Furthermore, it would have been obvious to outwardly incline the narrow groove 4' so that the thin rib 3 has a generally trapezoidal shape as claimed in view of (a) Kabe et al's teaching to incline a narrow groove adjacent a thin rib for preventing wear so that the thin rib is provided with a trapezoidal shape to prevent the thin rib from being chipped off and optionally (b) Montage's teaching to outwardly incline a narrow groove adjacent to a thin rib to prevent wear. No unexpected results of uneven wear resistance over Kukimoto et al have been shown. As to the limitation of a single generally trapezoidally shaped thin rib, both Kukimoto et al and Kabe et al teach using a single thin rib for preventing wear with a circumferential main groove in a heavy load /duty tire for trucks or buses. See col. 1 lines 10-15 and figure 19b of Kukimoto et al and col. 1 lines 5-10 and figure 2 of Kabe et al. The use of a single thin rib is consistent with Montagne's teaching that a protruding element (thin rib) may be provided on one side and not the other (col. 2 lines 59-62). With respect to the shape of the thin rib, Kabe et al recommends inclining the walls of narrow groove such that the thin rib has a trapezoidal shape to prevent the thin rib from being chipped off. See Kabe et al at col. 5 lines 2-12 and col. 8 lines 2-3. It is acknowledged that the trapezoidally shaped thin rib for preventing wear in Kabe et al is located on a center side instead of a shoulder side of the circumferential main groove. However, one of ordinary skill in the art, faced with the problem of preventing wear, is apprised from Kukimoto et al that the solution of using a thin rib for preventing wear may be located at the shoulder side of the main

groove (figure 19b) as an alternative to being located at the center side (figure 20b). One of ordinary skill in the art therefore would have been motivated from the applied prior art to use a thin rib at the shoulder side of the main groove and to form such a thin rib with a trapezoidal shape to improve uneven wear resistance (Kukimoto et al, Kabe et al) and to prevent chipping off of the thin rib (Kabe et al).

As to claim 3, the limitation of the height difference being 0-4 mm would have been obvious and could have been determined without undue experimentation in view of Kukimoto et al's teaching to locate the top of the protrusion (stepped zone) slightly below the tread surface so that the protrusion (which may define a height difference of 2 mm) contacts the road so as to serve as an uneven wear sacrificed portion.

As to claim 4, the claimed width of 4 mm or smaller for the thin groove portion would have been obvious in view of Kukimoto et al's teaching that groove 4' is a narrow cut.

As to claim 5, the limitation of the main groove being straight would have been obvious in view of Kukimoto et al's teaching that the circumferential groove for the figure 19a, 19b embodiment is straight.

Remarks

5) Applicant's arguments filed 12-23-03 have been fully considered but they are not persuasive.

The 103 rejection using Japan '212 has been withdrawn in view of the amendments to claim 1 filed 12-23-03.

With respect to applicant's statement that uneven wear can be effectively suppressed by imparting a particular groove shape to a main groove whose width widens during inflation, the examiner emphasizes that one of ordinary skill in the art would have been strongly motivated to use a thin rib located at a shoulder side of the admitted prior art's main groove whose width widens during inflation to obtain the desired result of preventing wear as per the teachings of Kukimoto et al. Furthermore, Kabe et al suggests forming such a thin rib with a trapezoidal shape to prevent the thin rib from chipping off.

As to the use of a single thin rib, both Kukimoto et al and Kabe et al disclose the use of a single thin rib for preventing wear.

As to the use of a generally trapezoidal shape, Kabe et al suggests forming the thin rib with a trapezoidal shape to prevent the thin rib from chipping off.

Applicant argues that Kabe et al teaches a rib positioned towards a center of the tire and not towards a shoulder of the tire. This argument is not persuasive since one of ordinary skill in the art, faced with the problem of preventing wear, is apprised from Kukimoto et al that the solution of using a thin rib for preventing wear may be located at the shoulder side of the main groove (figure 19b) as an alternative to being located at the center side (figure 20b).

6) No claim is allowed.

7) Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is (571) 272-1221. The examiner can normally be reached on Mon. - Fri. 7:30 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Steven D. Maki
March 27, 2004

Steven D. Maki 3-27-04

STEVEN D. MAKI
PRIMARY EXAMINER
~~GROUP 1300~~
AU 1733